



# Lyme Disease

## in New York City, 2020

- Ticks and tick-borne diseases, primarily **Lyme disease**, continue to be a concern in New York City (NYC).

- Ticks are about the size of a poppy or sesame seed, often making them difficult to see.

- Ticks avoid heat and direct sunlight and prefer cooler areas where trees, brush, leaf litter and tall grasses provide cover and shade from the sun.

- Most people are bitten by ticks during the **spring, summer** and **fall**, but ticks can be active whenever the temperature is above freezing.

- Lyme disease is caused by bacteria that are spread from an infected **blacklegged tick** (Image 1) when it bites humans and some animals, including dogs.

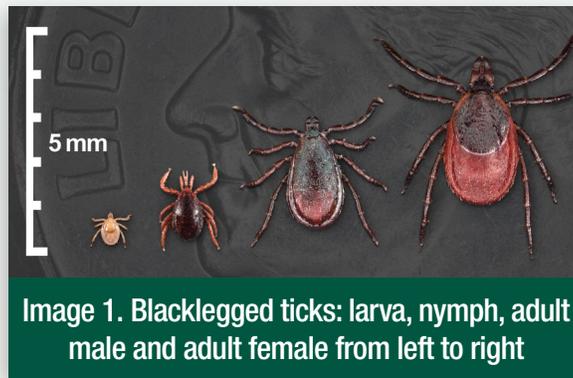


Image 1. Blacklegged ticks: larva, nymph, adult male and adult female from left to right

- Common symptoms of Lyme disease include a bullseye rash (Image 2), headache, fever, tiredness, swollen glands (lymph nodes), and muscle and joint pain. Symptoms usually develop three to 30 days after the tick bite.

- Lyme disease can be treated with prescription antibiotics.

- The blacklegged tick is established in two areas of NYC. It is widespread across **Staten Island** and is present in a small part of the **North Bronx**.

- The main **risk factors** for Lyme disease for NYC residents are **travel to an area where blacklegged ticks are widespread** and **spending time outdoors on Staten Island**.



Image 2. Bullseye rash (erythema migrans)

### NYC Tick Populations

Tick populations are monitored in select parks in NYC, most of which are on Staten Island. Findings show that blacklegged ticks:

- Are not established in Manhattan, Brooklyn and Queens.

- Are established across Staten Island and in Pelham Bay Park in the Bronx.

- Collected from the Bronx and Staten Island can carry the bacteria that cause Lyme disease.

## Lyme Disease in NYC, 2020

### Characteristics of Patients With Lyme Disease, NYC 2020

- There were 712 identified patients with Lyme disease in NYC in 2020, slightly less than in 2019 (Figure 1).
- Patients were from all five boroughs, and most were from Brooklyn (40%) and Manhattan (34%) (Figure 2).
- Most people became infected while traveling outside of NYC. The most commonly reported travel destinations were upstate New York (60%), Long Island (12%), Pennsylvania (12%), New Jersey (9%) and Connecticut (3%).\*
- Local transmission of Lyme disease continued to occur on Staten Island, where 88% of patients did not travel.\*
- Most patients were male (57%) and among those with a known race, most were non-Hispanic White (75%).
- Patients range from less than one year to 97 years, with an average age of 41 years old.

\*Among patients from the outer boroughs whose physician reported a bullseye rash, 70 patients' travel histories were obtained from either the patients (51%) or their health care providers (49%).

Figure 1. NYC Lyme Disease, 2010 to 2020

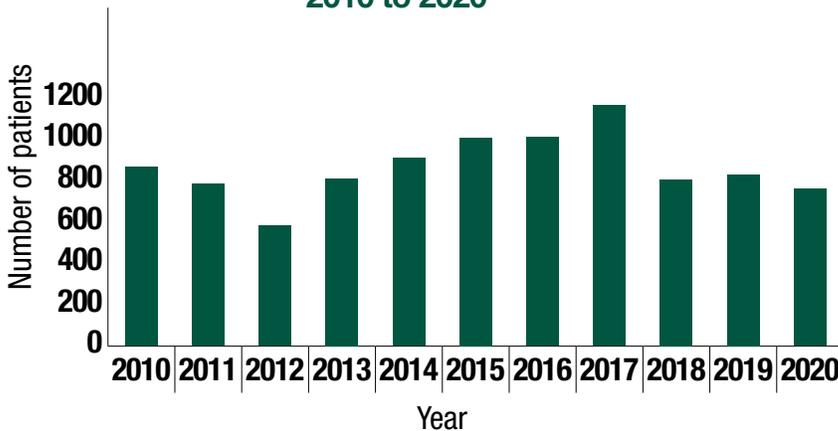


Figure 2. NYC Lyme Disease by Borough, 2020



### Follow These Tips Below to Prevent Tick-borne Diseases

Before You Go Outdoors	After You Come Indoors
<ul style="list-style-type: none"> <li>• Use insect repellent with DEET, picaridin or IR3535.</li> </ul>	<ul style="list-style-type: none"> <li>• Check your clothing for ticks and remove any that are found.</li> </ul>
<ul style="list-style-type: none"> <li>• Treat clothing and gear with products containing 0.5% permethrin.</li> </ul>	<ul style="list-style-type: none"> <li>• Put dry clothes in a dryer on high heat for 10 minutes to kill ticks. Wet or damp clothes will need more time in the dryer.</li> </ul>
<ul style="list-style-type: none"> <li>• Wear long pants, long-sleeved shirts and closed toe shoes, and tuck pant legs into socks.</li> </ul>	<ul style="list-style-type: none"> <li>• Shower as soon as possible after being outdoors.</li> </ul>
<ul style="list-style-type: none"> <li>• Avoid wooded and brushy areas with tall grass or leaf litter and walk in the center of trails.</li> </ul>	<ul style="list-style-type: none"> <li>• Check yourself, children and pets for ticks.</li> </ul>

 Talk to your veterinarian about the best tick prevention products for your pet.

For more information on ticks, including how to safely remove them, visit [nyc.gov/health/ticks](https://nyc.gov/health/ticks).  
For information on Lyme disease, visit [nyc.gov/health](https://nyc.gov/health) and search for **lyme disease**.